Non Archimedean Pseudodifferential Equations of Klein-Gordon Type

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We introduce a new class of non Archimedean pseudodifferential equations of Klein-Gordon type whose solutions can be easily quantized using the machinery of the second quantization. We study the Cauchy problem for these equations. We present a `semi-formal' constructruction, on the p-adic Minkowski space, of the neutral and charged quantum scalar fields having a nonzero p-adic number as mass parameter.

References

W. A. Zuniga-Galindo , Non Archimedean Pseudodifferential Equations of Klein-Gordon Type and Quantum Scalar Fields arXiv:1302.3506